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ABSTRACT

Trade literature management aids currently evolving in the United States and Europe are discussed. The approaches to the problem are varied, but the common objective of literature control is evident. The U. S. seems to be firmly committed to the Uniform System, and, as a national system, it is ably suited to the needs of architects, contractors, and manufacturers. Its chief disadvantage is the lack of knowledge of the workings or even the existence of the system among the three groups it professes to serve. The main problem facing the European community is one of direction--systems used are as varied as the countries themselves. In the U. S., use of computers is invaluable for their speed in sifting, sorting, and updating processes. While in Europe, computers are being employed to find a common terminology for member nations of the International Council for Building Research, Studies, and Documentation (CIB). The work of the CIB is so far-reaching that the U. S. must become aware of its activities. U. S. participation, either as a CIB member or as an observer is desirable, and all CIB publications should be readily available to all. Microfilm systems available for the handling of building material literature are discussed. (Author/SJ)

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SYSTEMS OF MANAGEMENT OF MANUFACTURERS' LITERATURE IN THE BUILDING INDUSTRY

A PAPER

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR

THE DEGREE OF MASTER OF LIBRARY SCIENCE

IN THE GRADUATE SCHOOL OF THE

TEXAS WOMAN'S UNIVERSITY

SCHOOL OF

LIBRARY SCIENCE

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We hereby recommend that the paper prepared under our supervision by Tommy M. Yardley entitled "Systems of Management of Manufacturers' Literature in the Building Industry"

be accepted as fulfilling this part of the requirements for the Degree of Master of Library Science.

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CHAPTER I

INTRODUCTION

The 1960's and 1970's have witnessed a tremendous explosion in the development of new materials, processes, and technologies. The written word has kept pace with these developments, and libraries, businesses, and industries find themselves deluged with printed matter both essential and trivial.

Each company is faced with the selection, storage, and retrieval of technological information vital to its existence. New systems and new products contain items of value to designers, researchers, and engineers searching for solutions to allied problems. These people read, listen, search, study, and analyze, but all too often the information they need eludes them.

A study conducted in the United States estimates that 16,000,000 engineer man-hours per year are spent in searching.[1] These are design and research hours society can ill-afford to lose, and when considered world-wide, the waste of human effort is staggering.

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[1]David Rowse, "The Retrieval of Technical Information," Electronics and Power, XV (March, 1969), 96.

In the building industry and its allied fields the need for better communication of information has become essential. This communication must span three areas: the manufacturer of an item, the architect who specifies the item, and the builder/contractor who installs it. The creation of a building requires the inter-communication of all three.

In the first stage of a building's design only building elements such as brick exteriors are considered. In the second stage, building materials and type of construction are decided upon. These decisions are based on product properties and product costs, and manufacturer's literature provides one basis on which to make the decision.

The architect must specify quantity and quality of the materials to be used. He may list an item by brand name, or he may give the contractor the freedom to install an item of equal or greater quality.

The contractor must be able to locate information on the cost and specifications of a given item before he presents his bids to the architect. His information must be accurate and up-to-date. Unambiguous terms for common concepts are of utmost importance for the development of better communications between the various parties in the building process.

The common medium for this communication is trade literature. However, trade literature, as opposed to traditional literature, offers a challenge by posing problems of particular importance to those who must deal with it. N. Kelbrick listed some of the problems associated with the management of a trade literature collection:

1. First and foremost, it becomes out of date very quickly.
2. It is commonly undated and its currency cannot easily be determined without reference back to the manufacturer concerned.
3. The technical information content is often extremely low, cost information generally non-existent, and reliability very uncertain.
4. Format and layout are usually determined by economic and advertising requirements rather than those of information storage and retrieval.
5. Acquisition tends to be haphazard and cannot easily be controlled.
6. It is expensive to process and store.[1]

Kelbrick continues, "On the other hand, good quality trade literature is becoming increasingly common. So far as the construction industry is concerned, the improvement, in content and presentation, is due to the efforts of several different interests."[2] These interests must be aware that unambiguous terms for common concepts are of utmost importance for the development of better communications between the various parties in the building process.

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[1]N. Kelbrick, "Trade Literature as a Library Material," Library Association Record, LXXIII (April, 1971), 65.

[2]Ibid.

The balance of this paper will be devoted to a discussion of the trade literature management aids currently evolving in the United States and in Europe. The approaches to the problem are varied, but the common objective of literature control is evident.

CHAPTER II

SYSTEMS IN USE FOR THE HANDLING OF BUILDING MATERIAL LITERATURE IN NORTH AMERICAN ARCHITECTURAL OFFICES

The Uniform System

The organizational scheme holding the most promise for American architects is the Uniform System. It is sponsored by the American Institute of Architects, the American Society of Landscape Architects, the Associated General Contractors of America, Inc., the Construction Specifications Institute, the Council of Mechanical Specialty Contracting Industries, Inc., the National Society of Professional Engineers, and the Producers' Council, Inc.[1]

In 1962, the American Institute of Architects, recognizing that its Standard Filing System in general use since the 1920's, was obsolete, invited the Construction Specifications Institute to join in the sponsorship of an industry-wide meeting to develop a more broadly based system.

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[1] Uniform System for Construction Specifications, Data Filing & Cost Accounting, Title One, Buildings (n.p.: American Institute of Architects, Associated General Contractors of America, Inc., Construction Specifications Institute, Inc., Council of Mechanical Specialty Contracting Industries, Inc., n.d.), p. 0.1.

The first conference "discussed the development of a filing system for building product data based on specifications, a concept later enlarged to embrace a specification outline and a contractors' cost accounting guide as well."[1]

The existing system has been developed in response to pressing needs for a better and more rapid classification of technical data. The endorsing organizations realized that a data filing system must be flexible enough to accept readily any changes in technology, yet sufficiently systematic to establish logical guidance for both user and producer in their classification and identification of technical literature. This system, in both principle and mechanics, encourages closer communication and understanding between the major forces in the construction industry: the manufacturer, the designer/specifier, and the builder. The approach to data classification is designed to remain consistent for many years, although continuing investigations will be made by the organizations for improvement of the document.

The system itself provides for product literature and related material to be filed numerically under one of the sixteen divisions. Each division is composed of certain subdivisions corresponding in general with the section

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[1] Ibid.

titles used in specification writing. These titles are widely used in the field of architecture.

There are several advantages to this concept. The user will be able to relate the Uniform System to the specification outline since both are based on the division concept. With a basic structure consisting of only sixteen numbers these numbers and names are easily memorized through the repetition of normal use. The division title and number will remain constant. These divisions and subdivisions are already familiar to the construction industry. Lastly, the manufacturers are assured of consistent classification of their product, since the proper classification for preprinting on their literature will be assigned by a central agency staffed for that purpose. The manufacturer is also assured that those who wish to locate a particular product among the filed material will be using the same system used when the catalogs were premarked.

This last point is essential for the success of the system. Product literature is most quickly and accurately filed when it has been imprinted with the appropriate filing classification. Producer, designer, specifier, and buyer alike are assured that literature so identified will not be overlooked because it has been improperly classified.

The sixteen categories or divisions include: Conditions of the Contract; General Requirements; Site Work; Concrete; Masonry; Metals; Carpentry; Moisture Protection; Doors, Windows, and Glass; Finishes; Specialties; Equipment; Furnishings; Special Construction; Conveying Systems; Mechanical; and Electrical.

When a building product catalog or other literature arrives preclassified and premarked, the Uniform System designation permits a file clerk without technical knowledge to file it correctly and rapidly. The only policy decision which must be made is whether the literature is to be kept.

Division beyond the sixteen major sections is accomplished by the use of an expansion system. These expansions repeat the section number plus the ninety-nine numbers following. For example, the seventh division is Moisture Protection[1] and is designated as 07. Roof Accessories have been given the number 0780, and plastic skylights are located at 0781 within the schedule. Wood flooring is considered a subsection of Finishes,[2] the ninth division. It is given the number 0955, while wood parquet flooring is designated 0957. Not all of these numbers have

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[1] Ibid., p. 3.4.

[2] Ibid.

been assigned, so there is room for further expansion. If it becomes necessary to include over ninety-nine subdivisions, these subdivisions can be further divided decimally. While some of the manufacturers are not consistent in the manner of writing the numbers assigned, it is still easy to understand the classification.

Material in any of the subdivisions may be arranged alphabetically by manufacturer's name, local products versus those from distant areas, or any other arrangement that suits the user's needs. The important consideration is that the filing classification and designation be constant but not restrictive.

Other important information preprinted on the literature includes publishing source, date, and manufacturer's name. The inclusion of these items will aid the user in his identification of source material and will alert him to items needing discarding or updating.

Sweet's Architectural and Industrial Construction Files

An aid which has long played an important role in the architect's building material library is Sweet's Architectural and Industrial Construction File.[1] This

[1] Sweet's Architectural Catalog File, Vol. I: Structural Systems, Foundations, Site Work (New York: McGraw-Hill Information Systems Company, 1970), pp. 1-95.

file is actually a collection of catalogs[1] classed by product group and filed alphabetically by firm name. Many architectural offices used the Sweet's numbering system for other building material catalogs and brochures, but this use was complicated by Sweet's frequent group and number changes. In 1971, in response to growing user preference, the Sweet's files were organized in accordance with the sixteen-division Uniform Indexing System.

The user of the Sweet's file may search by firm name, product, or trade name. An identifying symbol is taken from the Firm or Trade Name Indexes, while the Product Index offers only the section number of that product. For example, Rohm & Haas Company is the manufacturer of Plexiglas, an acrylic material used in skylights and nonbreakable windows. By looking in either the Firm Index[2] or the Trade Name Index, one finds the identifying number of 5a/Roh. The Trade Name Index also identifies Plexiglas as a "plastic material."[3] If one knew only the product heading of plastic material, he would find the broader product

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[1] Thomas' Register of American Manufacturers is a similar collection of manufacturers' catalogs. As it is basically a collection rather than an indexing system, it has not been included in this discussion.

[2] Sweet's Architectural Catalog File, p. 20.

[3] Ibid., p. 84.

number of five.[1] Within the file itself, the identifying number is printed in the upper right corner.

Many other in-house classification systems are in existence. Rohm & Haas Company has its own numbering system for its products.[2] Since the company deals in primary products from which a finished item is later manufactured, it does not meet the requirements for inclusion in the Uniform System. The manufacturer of the finished item may apply to the Uniform System for the proper classification of his product.

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[1] Ibid., p. 48.

[2] Donald R. Willis, private interview held in Dallas, Texas, February, 1972.

CHAPTER III

THE SfB CLASSIFICATION SYSTEM IN USE FOR THE HANDLING OF BUILDING MATERIAL LITERATURE IN BRITISH ARCHITECTURAL OFFICES

The SfB System of classification is in general usage in building industry libraries in the United Kingdom. The development of the system had its beginnings in 1947, when the authorities responsible for rebuilding destroyed areas in Belgium and France after the Second World War called for a conference on building documentation. This conference was held in connection with the Paris International Exhibition on Housing and Building, and its most important topic was the international need for documented information and the organization of such information.[1]

This conference took as its model the Finnish SAFA Building Standards Institute, sponsored by the Society of Finnish Architects and now known as the SAFA Stadsplane och Standardiserings institutete. This institute continuously published information sheets preclassified for filing in

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[1]Brenda White, "The SfB System," Library Association Record, LXVIII (December, 1966), 428.

practitioners' offices. While the Conference agreed that the format and classification of documents for filing should be standardized, no solution was found to the problem of international classification.[1]

In 1952, the International Council for Building Documentation and the International Federation for Documentation set up a joint committee to investigate this problem. The International Building Classification Committee planned its work in four phases:

1. to study and publish selected UDC numbers to be used for building classification.

2. to study and publish the Swedish SfB filing system.

3. to study other systems of classification and filing in the building field.

4. to develop a standard method for classification and filing.[2]

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[1]L. M. Giertz, "Introduction: IBCC, 1952-1966," in A Survey of the Activities of International Building Classification Committee, 1952-1962, Including Reports Numbers 1 to 4 (Copenhagen: Danish Center for Documentation, 1962), p. 3.

[2]Construction Indexing Manual Incorporating the Authoritative United Kingdom Version of the International SfB Classification System and Superseding the RIBA SfB/UDC Building Filing Manual, 1961 (London: Royal Institute of British Architects, 1968), p. 9.

Phase 1 resulted in the publication of ABC: Abridged Building Classification for Architects, Builders, Civil Engineers: a Selection from the Universal Decimal Classification.

Phase 2 began in 1955. Egil Nicklin said,

> Originating from Sweden the SfB system has gained international employment and is recommended by the CIB (International Council for Building, Research, Studies, and Documentation) and the IBCC (International Building Classification Committee) as a system for registration within the building field. The letters of its name come from the Swedish name of the committee that created it. An international committee and its representatives in different countries survey the use of the system and its development.[1]

Phase 3 consisted of a comparative study of filing systems already in use throughout the world. Fifty-five systems were reviewed and compared, and the two most useful systems were the Universal Decimal System and the SfB. The UDC was accepted for documentation in the sense of reference and abstract card files in documentation centers and world-wide exchange service,[2] but it was felt to be too cumbersome for everyday use in the architect's or engineer's offices. The SfB was useful in these areas because of its

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[1]Egil Nicklin, "The SfB System," in A Survey of the Activities of the International Building Classification Committee, 1952-62, Including Reports Numbers 1 to 4 (Copenhagen: Danish Center for Documentation, 1962), Report 1, p. 1.

[2]Giertz, "Introduction: IBCC 1952-1966," pp. 1-10.

shortness, flexibility, and relevance to the building practice.[1]

Team reports were made on each of the first three phases. The IBCC accepted the conclusions that the SfB was the most suitable system and made the following recommendations:

1. that CID should publish or promote the publication of the SfB system in several languages for use in the classification of trade catalogues, codes of practice, etc.

2. that copyright be vested in CIB.

3. that the SfB tables should be amended only on the advice of the IBCC.

4. that SfB/UDC building filing manuals might be published nationally on the responsibility of CIB member institutes.[2]

In Great Britain, copyright of and responsibility for promotion of the SfB System is vested in the Royal Institute of British Architects. The English version differs from that of the Swedes in that alternative UDC numbers are given and sections which had no place in the Swedish version were added.

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[1]White, "The SfB System," p. 428.

[2]Ibid., p. 429.

In 1966, an investigation was made to find out what proportion of society members were using the SfB System. The results suggested that 65 per cent of architects, 55 per cent of quantity surveyors and 45 per cent of contractors were using it.[1]

Brenda White states,

> It is well to remember, in any discussion or criticism of the SfB System, that in its original form, SfB was designed for the arrangement of specifications and bills of quantities, and that only by combination with the relevant sections of U. D. C. did it become a classification system for use in libraries and application to a different type of material; and also that it was based upon traditional building practices in Scandinavia in 1948, and therefore the internationally-decreed freeze on the tables until 1965 has insured not only consistency of application (its primary purpose), but also the exclusion of new developments and different practices in other countries.[2]

The SfB is a faceted system of classification and is made up of four major "departments"[3] or divisions. A faceted system is one in which the various aspects of a subject arrange themselves into a sequence of ideas. In this system, each division is identified by a separate table, and each table is given a different type of notation. The first division, Table 0, has as its notation a number,

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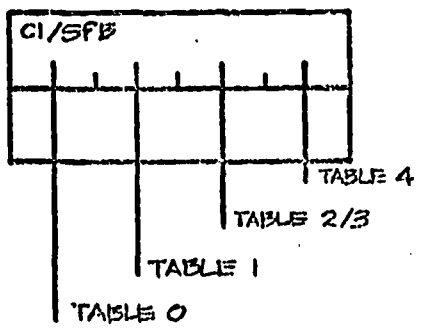
[1]"SfB for Office Libraries: Three Surveys," RIBA Journal, LXXIV (January, 1967), 40.

[2]White, "The SfB System," p. 430.

[3]Construction Indexing Manual, p. 11.

usually two or three digits long. This table represents the built environment or a specific type or group of buildings or the spaces within or around them. The second division, Table 1, represents the different parts or elements of the building. Its notation is a bracketed number, usually two or three digits long. Tables 2/3 are concerned with construction forms and materials. These tables are combined and are always used together. Their notation is a capital letter with a lower case letter. This may be followed by a number as in Fg2. Table 4 represents abstract concepts such as a particular activity or requirement like insulation or waterproofing which is not a part of any product, element or building, but does appear to be a basis for classification. The notation for this table is a bracketed capital letter sometimes followed by a number and a lower case letter. The notation might appear as E2g.[1]

The filing of material is simplified by the use of a uniform classification box:



[1] Ibid., pp. 11-15.

Each section of the box is assigned to a table. The section of the box which contains the symbol furthest to the left indicates the division under which the document should be filed. The symbols that follow the initial symbol are used to subdivide the file. When trying to locate material, the user searches in the broader heading first and then looks for the appropriate subheading.

In Great Britain, as in the United States, much material is preclassified by the publisher or producer of the information. Often the degree of classification given is greater than that required by small libraries. In this case, it has been recommended that the notation from Table 0 be shortened to no more than two digits. The final digit is dropped or disregarded for filing purposes.[1] For additional information on the filing of material under the SfB system the reader is referred to Appendix A.

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[1] "Guide to CI/SfB Classification," Architects Journal, CXLVIII (August 14, 1968), n.p.

CHAPTER IV

EFFORTS IN DOCUMENTATION BY THE INTERNATIONAL COUNCIL FOR BUILDING RESEARCH, STUDIES AND DOCUMENTATION

The International Council for Building Research, Studies and Documentation is an international non-governmental organization set up in 1953 at the instigation of the United Nations' Economic Commission for Europe "to encourage, facilitate and develop international cooperation in building research, covering not only the technical but also the economic and social aspects of building."[1]

Membership to the council is made up of national research institutes, university departments, trade associations and enterprises which have research and development departments, professional organizations, and major national building research organizations throughout the world.

The work of the Council is done through international working commissions composed of members from research organizations working on a particular subject.

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[1] International Council for Building Research, Studies and Documentation (CIB), Information Flow in the Building Process--Classification and Coding for Computer Use (Oslo, Norway: Norwegian Building Research Institute, 1968), n.p.

These commissions "aim to provide the technical and scientific basis for international recommendations on standards and practice for transmission to governments, usually through the competent Committees of the United Nations."[1]

The Council, also known as CIB, depends upon the voluntary collaboration of its national member institutes. These institutes normally make themselves responsible for the organization of the work in a particular subject on an international basis.

It is CIB's intention that international collaboration should not be limited purely to exchange of data between scientists and research workers, but that "the aim of research should be to make building more efficient through the application of the results of research by practitioners, such as the architect, the engineer and the building contractor."[2]

In 1968, a symposium on information flow in the building process was organized for CIB by the Norwegian Building Research Institute. This project was undertaken because of the interest in the subject and the fact that a number of national research institutes are actively engaged

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[1] Ibid.

[2] Ibid.

in its study. The symposium was attended by 115 participants representing most of the European countries, Canada, Israel, and Turkey. Eight sessions were held, and topics ranged from reviews of national data now in existence through theory, management, and projections for the future.

In his closing statement, the symposium's chairman, Professor V. Cervenka, stated,

> This, after all, is the first occasion when we have brought together representatives from all different parts of the process on the international level . . . we have been able . . . to describe some of the problems and relate these in a very general way to an understanding of the theory on which all our work has to be based.
> Even so, the inventory of what is going on in different countries and areas which has been presented here is a valuable first step.[1]

Professor Cervenka points out the need for internationally agreed upon terminology and definitions of concepts. He feels the computer can cross these national boundaries and ultimately contribute to the development of a model of a system for the whole building industry. Committees have been set up to study all material contributed, and a final recommendation will be made to CIB in view of further programs, both private and governmental.

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[1] Ibid., "Closing Statement," p. 1.

CHAPTER V

TYPICAL MICROFILM SYSTEMS AVAILABLE FOR THE HANDLING OF BUILDING MATERIAL LITERATURE

IDAC System

Microfilm and microfiche are moving rapidly into the trade literature field. One system in use is the IDAC System.[1] This system works through a language of numbers and letters comprising three types of numbers: the Master Index numbers, the IDAC Retrieval Keys, and the IDAC numbers.[2]

The Master Index numbers form a classification system for generic products. The products are listed by divisions and are subdivided by categories and subcategories. The numbering system used corresponds with that of the Uniform System, although the form of notation differs somewhat. For example, the number 0970 in the Uniform System is written 09/700 in the IDAC System.

The IDAC Retrieval Keys pinpoint a manufacturer's product information in the DataBank. They lead to specific

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[1] IDAC Systems (New York: IDAC Systems/Division, n.d.

[2] Instant IDAC (Instant Data Access Control) (New York: IDAC Systems/Division, n.d.

card frames of a given manufacturer's product information on either black and white or color microfiche. IDAC numbers standing without the retrieval codes refer to names of manufacturers or other organizations as listed in the numerical index to manufacturers and have nothing to do with the information retrieval within the system.

To find a product, one defines it in terms of its major product heading. This can be done by the use of an alphabetical guide to the major product headings. One goes to the index and finds the closest heading; he then turns to the division and line number indicated by that master index number. The user narrows his area by reviewing the subclassifications listed. The Master Index number now has additional subsections, and beside the narrowest classification the user finds the appropriate retrieval key.

The retrieval key is made up of the manufacturer's permanently assigned IDAC number, the microfiche card number, and the location of the specific product information sought. If there are multiple manufacturers, a number for each will be given.

IDAC offers a number of additional services to its subscribers. A library designed to accommodate specific requests for information beyond the components of the IDAC

DataBank has been established. Federal, military and other specifications, standards and codes, and American Society for Testing Materials information are available through this library. Hard copies of articles, reports, and books are prepared and provided in answer to individual requests. Bibliographies and abstracting services, covering a vast array of published information, are offered on a current and retrospective basis. IDAC also provides specialized index/checklists for individual projects. These checklists cover the project's areas, systems, and products. An index is provided to identify all the pages of manufacturers' information in the DataBank on products relevant to the project.

In 1972, IDAC added a valuable alphabetical guide to Manufacturer's Retrieval Keys. Reader-printers and frequent updatings of the DataBank round out this complete service.

Showcase Microfilm Library for Construction

The producers of the Showcase Microfilm Library state that it is "the first system of its kind designed solely for the use of architects, engineers, builders, and procurement agents who have the job of designing, specifying, building, and procuring of construction material,

equipment and items pertaining to the construction industry."[1]

It contains over 800,000 pages of engineering information, specifications, and detail drawings from over 5,000 manufacturers. The Showcase Library also contains general information, standards, and specifications from associations, institutions, and councils in the building industry, U. S. Corps of Engineers guide specifications for military construction, civil works construction, military family housing and emergency construction, federal specifications, standards, and qualified products lists pertaining to all divisions of the uniform system.

Each library is issued a computer-organized index and a supplemental keyword index. The keyword section is based on the Uniform System and is cross-referenced to the Showcase Microfilm Library Index. This index is well broken down into sections of interest for its users. It contains a separate listing of National Associations, Institutes, and Councils, a trade name section including description and name of manufacturer, an alphabetical listing of all manufacturers, type of products manufactured, division number, and cartridge and frame number for

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[1] Showcase Microfilm Library (Detroit, Michigan: Showcase Microfilm Library for Construction, 1971).

retrieval within the system. Products are listed by division number within the Uniform System classification.

Showcase will also provide search services when requested on products or manufacturers not included in the library. Information is sent in a form that will fit into the scheme as a whole. The library may be ordered to include all sixteen divisions of the Uniform System, or the electrical and mechanical sections may be deleted or ordered alone. Updating and new indexes are provided every ninety days for the subscribers of the service. A 3M 400 Reader/Printer is optional with the purchase of the system.

Information Handling Services

The Information Handling Services, formerly known as the Visual Search Microfilm File, maintains a number of standard microfilm information packages. A package may contain product information, government specifications, or other technical information. Each serves a particular function such as design engineering, research projects, process development, or government contract administration. If a custom information system is necessary, the IHS professionals will gather that information in such forms as engineering drawings, punch cards, or magnetic tapes

and merge this internal data with selected external data to suit the needs of a specific company.[1]

The Building Products File/Spec-Data II was developed for the architect, engineer, contractor, and specification writer in cooperation with the Construction Specification Institute and uses the sixteen divisions of the Uniform System. Subscriptions are available for the entire file or for selected sections.

Indexing of the material is through manufacturer's name, brand name, product, or product characteristic. The Product Selector file provides physical and technical product characteristics of similar products. This permits the user to make value judgments through its side-by-side data listings.

The product index is the catalog section of the library. The brand name index refers the user to the manufacturer and to the location of data in the catalog section, while the manufacturer's index lists addresses, product lines, and the availability of the Construction Specification Institute's Spec-Data sheets.

The system is computer-maintained and updated every 180 days. At present, it contains almost 500,000 pages of

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[1] Information Handling Services (Englewood, Colo.: Information Handling Services Division, n.d.).

information including building materials and products, association and institute specifications and standards, and CSI Spec-Data sheets. It may be set up to utilize a reader/printer or as a satellite system sharing the printing capacity of an existing data center. In this case, only a reader is provided.

Technical Indexes

A somewhat different approach to a microfilm building product data library has been taken by Technical Indexes, a British company. The index to over 122,500 catalog pages of product data is printed in book form and issued to each user of every subscription. Thus, "the microfilm is not used as an index medium--only as a retrieval medium."[1] Mr. Rowse further states,

> The book "codes" the engineer to specific points in specific cassettes. Clipping in the correct cassette and running the film to the chosen catalogue pages are the work of seconds. It also takes less time to switch from cassette to cassette, looking each time for a specific coded frame, than it does to browse through hundreds of further frames in the same cassette, even though they may refer to the same product group.[2]

Technical Indexes updates its files every four months by adding cartridges of new material and reprinting

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[1]Rowse, "The Retrieval of Technical Information," p. 98.

[2]Ibid.

the book index to deny access to the old material. This is felt to be more practical than complete refilming, and through use of the current book index still maintains "file integrity."[1]

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[1] Ibid.

CHAPTER VI

CONCLUSION

Definite and well-directed beginnings have been made toward the solution to the documentation and control of trade literature. The United States seems to be firmly committed to the Uniform System, and, as a national system, it is ably suited to the needs of architects, contractors, and manufacturers in this country. Its chief disadvantage is the lack of knowledge of the workings or even the existence of the system among the three groups it professes to serve. A vigorous explanatory program by the sponsoring bodies carried from the national to the local level through short seminars or meetings could alleviate this problem.

The main problem facing the European community is one of direction. Their first conference aired systems and views from all participating nations. These systems are as varied as the countries themselves, but the participation and enthusiasm shown promise further cooperation in this area.

Membership in the International Council for Building Research, Studies, and Documentation is varied enough to insure a stimulating interaction between the

members. The presentation of findings at future symposiums, the publishing program of the Norwegian Building Research Institute, and the support of the United Nations will place these findings before the interested public.

The use of the computer through commercial programs in the United States is gaining support in the building industry. The speed of these computers in the sifting, sorting, and updating processes is invaluable, especially in the area of military specifications.

The present application of the computer in the International Council for Building Research, Studies, and Documentation's program is aimed at finding a common terminology for the member nations. This use will expand to include investigations of model systems of international documentation for the building industry as well as applications of these systems at a later date.

The work of the International Council for Building Research, Studies, and Documentation is so far-reaching that the building trade in the United States must become aware of its existence. While organizations within the United States may be committed to the Uniform System, they must recognize the direction other countries are taking in documentation. United States participation in CIB is desirable, either as an active member or as an observer,

and CIB publications should be available to all who are interested. It is only through these cooperative efforts that a workable system for all may be reached.

APPENDIX

How to classify

In order to choose the correct symbols to put in the box, it is necessary to ask oneself a series of questions, in strict order, taking the four tables in turn, as follows:

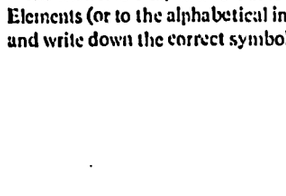
Table 0 Built environment

Does the document refer specifically to a particular building type or group of building types or the spaces within or around them?

If the answer is No, write nothing in the the first part of the classification box and proceed to the next question.

If the answer is Yes, turn to Table 0 Built environment (or to the alphabetical index) and write down the correct symbols.

As an example, if the document is about hospitals (and about no other type of building), the symbols will be:



Then on to the next question:

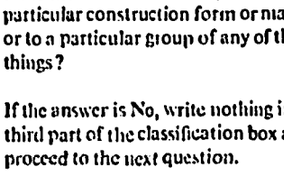
Table 1 Elements

Does the document refer specifically to a particular building or site element or group of elements?

If the answer is No, write nothing in the second part of the classification box and proceed to the next question.

If the answer is Yes, turn to Table 1 Elements (or to the alphabetical index) and write down the correct symbol.

As an example, if the document is about sanitary fittings (and about no other element), the symbols will be:



Then on to the next question:

Table 2/3 Construction form

Does the document refer specifically to a particular construction form or material, or to a particular group of any of these things?

If the answer is No, write nothing in the third part of the classification box and proceed to the next question.

If the answer is Yes, turn to Table 2/3 (or to the alphabetical index) and write down the correct symbols.

If the subject is a product but does not relate to any specific construction form from Table 2, enter Y in the classification box.

As an example, if the document is about clay pipes (and about no other product), the symbols will be:

Then on to the next question:

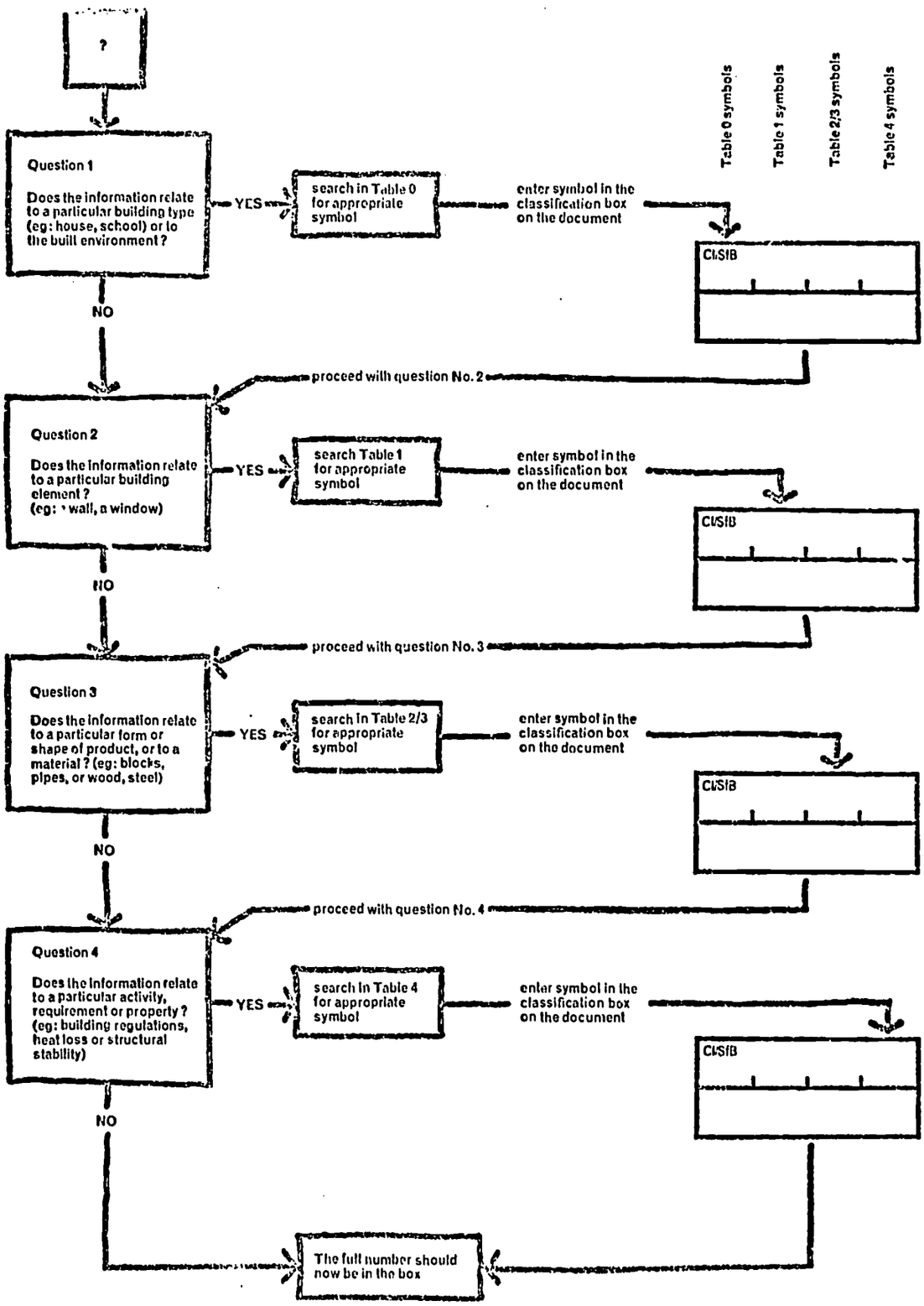
Table 4 Activities and requirements

Does the document refer specifically to a particular activity, property or requirement like insulation or fire resistance or anything else which is not part of any product, element or building, but appears to be a basis for classification?

The answer will very often be No for preclassified trade literature on products because only rarely can one property be singled out as a basis for classification (almost all products have many properties which are of interest to the designer or constructor and it is not very useful to single out only one of them, unless the document being classified is about only one of them).

If the answer is Yes, turn to Table 4 Activities and requirements (or to the alphabetical index) and write down the correct symbols in the last part of the classification box.

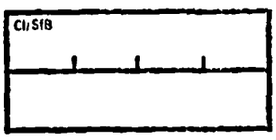
As an example, if the document is about dimensions (and about no other property) the symbols will be:


?
Question 1
Does the information relate to a particular building type (eg: house, school) or to the built environment?
YES
search in Table 0 for appropriate symbol
enter symbol in the classification box on the document
Table 0 symbols
Table 1 symbols
Table 2/3 symbols
Table 4 symbols
CI/SfB
NO
proceed with question No. 2
Question 2
Does the information relate to a particular building element? (eg: a wall, a window)
YES
search Table 1 for appropriate symbol
enter symbol in the classification box on the document
CI/SfB
NO
proceed with question No. 3
Question 3
Does the information relate to a particular form or shape of product, or to a material? (eg: blocks, pipes, or wood, steel)
YES
search in Table 2/3 for appropriate symbol
enter symbol in the classification box on the document
CI/SfB
NO
proceed with question No. 4
Question 4
Does the information relate to a particular activity, requirement or property? (eg: building regulations, heat loss or structural stability)
YES
search in Table 4 for appropriate symbol
enter symbol in the classification box on the document
CI/SfB
NO
The full number should now be in the box

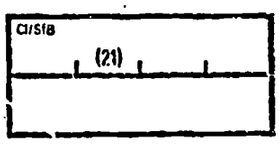
An example

A document on clay bricks in external walls would be classified in this way:

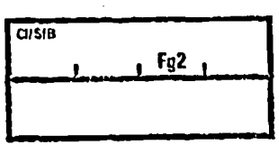
1 Does it deal with a particular built environment in Table 0?
Answer: No



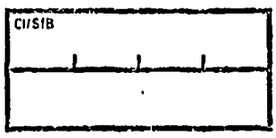
2 Does it deal with a particular element in Table 1?
Answer: Yes – External walls.
Symbols from Table 1 are (21).



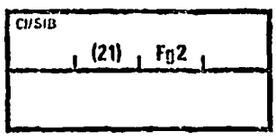
3 Does it deal with a particular construction form in Table 2/3?
Answer: Yes – Clay bricks.
Symbols from Table 2/3 are Fg2.



4 Does it deal with a particular activity or requirement in Table 4?
Answer: No



The full reference for the document will be (21) Fg2 and will appear in the box as:



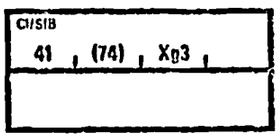
A warning

The first symbol to appear in the box (the one which is furthest to the left) is more important than any of the others*, since it will usually determine in which main division of the library the document will be placed. In a few offices, with a fully equipped library, the librarian will check all symbols to ensure that they are correct and suitable, but most offices are unable to do this. The classifier must therefore give particularly careful thought to the first symbol.

*Symbols which follow the first will be used mainly to provide a subdivision of the files under the first symbol in large libraries. It may therefore often be unnecessary to use all possible symbols. Small libraries will probably not use them and large libraries will be able to add them if necessary.

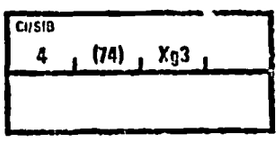
Examples:

1 A document about fireclay sanitary fixtures for hospitals. At first sight, the correct class number, ie the reference on the document, appears to be:

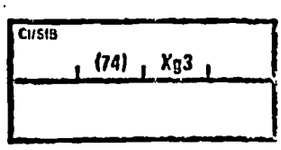


In this case the document will be filed under 41 Hospitals, since 41 is further to the left than (74), and will only be found by someone searching the file on the building type 'hospitals'. This is perfectly correct if the document is about sanitary fittings in hospitals only, and no other type of building.

If the document actually describes sanitary fittings in relation to health and welfare buildings the class number should be:

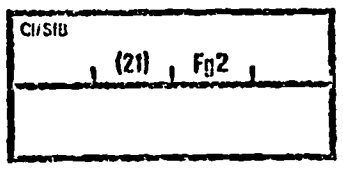


But if the fittings are described in relation to all building types (if the title is misleading), the table 0 symbols should be omitted altogether, and the document classified:



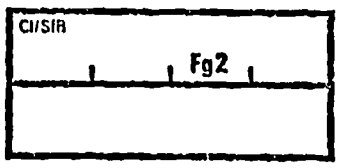
If this is done it will be filed and found in the part of the library which includes information on sanitary fixtures in general.

2 A document about The use of clay bricks for external walls. At first sight, the class number should be:



But is the document really restricted to a description of the use of bricks in external walls?

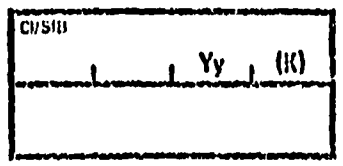
If it is really about the bricks, and the mention of external walls is only a line or two, of no particular importance, the classification would be better as:



If, on the other hand, it describes the construction of external walls (of bricks) at length, and not of any other element, then (21) Fg2 is correct.

3 A document about Curing damp by electrolytic action.

Table 4 is not used for classification of literature on products, unless it is preceded by a letter from Table 2/3. In this case the thing which is being described has no recognisable form or material as such and is therefore classified Yy. This means that literature on products is always filed in Table 0 or 1 or 2/3, not in Table 4:



UDC

The bottom half of the box may be used for UDC (Universal Decimal Classification) numbers, but UDC equivalents have not been given in this edition of the manual.

UDC has been omitted because recent surveys have shown that it is used in very few office libraries, and these are generally large libraries with full time librarians, who check all class numbers as a matter of course, and often find it necessary to reclassify documents.

These two factors, combined with the decision of the International Building Classification Committee that UDC should not be used on documents of an ephemeral nature (eg: trade leaflets with a life of only two or three years), resulted in the decision to exclude UDC from this edition.

This does not mean, however, that UDC symbols should necessarily be omitted. Manufacturers exporting to Europe may wish to continue to classify by UDC as well as SfB, and UDC references can be obtained from *ABC (Abridged Building Classification for Architects, Builders and Civil Engineers: a selection from the Universal Decimal Classification)*, published 1955, with supplement 1965, by CIB (International Council for Building Research Studies and Documentation), Rotterdam and available from British Standards Institution (Overseas Sales) 101 Pentonville Road, London N1.

UDC should continue in use for technical publications which are likely to have a longer life than trade literature, and are to be found in the technical reference sections of public libraries.

Even when UDC is not included, the bottom half of the box should be retained (without the lettering UDC) for use by office libraries.

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